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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,606	08/18/2003	Rene Mattern	FA1093USNA	4930

23906 7590 11/29/2006

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EXAMINER	
SELLMAN, CACHET I	

ART UNIT	PAPER NUMBER
1762	

DATE MAILED: 11/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/643,606	MATTERN ET AL.	
	Examiner	Art Unit	
	Cachet I. Sellman	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *9/21/2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,4 and 6-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,4 and 6-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Acknowledgement is made of the amendment filed by the applicant on 8/18/2006, in which claim 2 was cancelled and claim 6 was amended. Claims 1, 3-4 and 6-8 are currently pending in U.S. Application Serial No. 10/643,606.

Response to Arguments

1. Applicant's arguments, see page 8 paragraph 2 filed 8/18/2006, with respect to claim 1 have been fully considered and are persuasive because the Talmore reference teaches restricting wavelengths in the range of 600-750 and 1200-1700 and 750-1200. The rejection of claim 1 has been withdrawn.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 3-4 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Emch (US 2002/0071918 A1) in view of Rekowski et al. (US 2003/0031804 A1), Crane et al. (US 6677260 B2) and Anzai et al. (US 4837478).

Emch discloses a process for coating a substrate by first applying a powder coating to the surface (abstract) then treating the surface with NIR having a wavelength form 0.7 – 7 micrometers (700 – 4000 nm).

Emch does not teach using a filter coated with borosilicate glass, silica glass or vitreous ceramic to restrict the wavelength to 250 – 3000 nm, wherein the restricted NIR radiation has a wavelength ranging form 750 – 1200 nm as required by **claim 1**.

Rekowski et al. discloses a process for powder coating a substrate, such as a car [00021] and curing the coating by using NIR radiation in the wavelength of 760 – 1500 nm (abstract). Rekowski further discloses that curing in this range results in coatings having rapid curing, sufficient hardness and a good surface quality [0007].

Crane et al. discloses a glass that is capable of absorbing UV radiation and filtering in the visible region that can be used for tungsten halogen lams ad other high temperature light sources (abstract). The glass is a silica glass and has a transmission greater than 90% in the near infrared region between 760-2500 nm (col. 5,lines 8-17).

Anzai et al. discloses device that is capable of radiation light rays in the near-infrared region (abstract). The device is made of an electric discharge lamp and filter, which removes the visible region and permits the near infrared to pass through (abstract). The filter is glass coated with an absorbing agent such as molybdenum oxide, chromium oxide, etc. which has a transmission rate of zero in the visible light and transmission greater than 80% in the wavelength range from 750 – 1000 nm (col. 3, lines 25-64).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the process of Emch to include using the wavelengths of Rekowski. One would have been motivated to do so because both Emch and Rekowski et al. disclose processes for powder coating a three dimensional object such as a car and irradiating the coating with NIR. Rekowski et al. further discloses that using wavelengths in the range of 760- 1500 nm results in rapid curing, sufficient hardness and good surface quality therefore one would have a reasonable expectation of success in irradiating the powder coating to have sufficient hardness and good surface quality.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the process of Emch and Rekowski to include the filter of Crane et al. and Anzai et al. One would have been motivated to do so because Emch in view of Rekowski disclose the use wavelengths in the range of 760-1500 nm but does not disclose how to restrict the wavelengths; Crane et al. teaches a silica glass that is capable of transmitting in the near infrared region when used with a halogen lamp (NIR emitter) and Anzai et al. teaches a coating that can be applied to glass that will shorten the wavelength range that is transmitted to 750-1000 nm therefore one would have a reasonable expectation of success in using the glass coated with an absorbing agent in order to transmit wavelengths in the range of 760-1500 nm.

Emch teaches the use of combined radiation and a heated convection oven to treat the coating [0049] as required by **claims 3 and 4**. Anzai et al. teaches that the filter is coated with an absorbent substance as required by **claim 6**. Rekowski et al. discloses that the coating is cured within no more than 60 seconds [0065] as required by **claim 7**. Emch discloses that the coating is applied to an automobile [Fig. 2 and 0003] as required by **claim 8**.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cachet I. Sellman whose telephone number is 571-272-0691. The examiner can normally be reached on Monday through Friday, 7:00 - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Cachet I Sellman
Examiner
Art Unit 1762

cis

TIMOTHY MEEKS
SUPERVISORY PATENT EXAMINER